

Applicant: Santiago
Serial No.: 10/774,705

PATENT
Atty Docket: 1506-319

AMENDMENTS TO THE CLAIMS

Please amend the claims 23-26, 34, and 38 as set forth below.

Please add new claims 40-61 as set forth below.

LISTING OF CLAIMS

1-22. (Cancelled)

23. (Currently Amended) An adjustable arc sprinkler mechanism comprising:

an upper rotatable sprinkler housing;

a lower stationary sprinkler housing;

an arc stop assembly interposed between said upper and lower sprinkler housing;

said arc stop assembly including a ~~an angularly~~ fixed arc stop member and an angularly movable arc stop member,;

a plurality of mating gear teeth disposed on said rotatable sprinkler housing and said arc stop assembly, said plurality of mating gear teeth being selectively engagable; and

wherein at least one position of said angularly movable arc stop member enables said rotatable sprinkler housing to rotate in one continuous direction.

24. (Currently Amended) An adjustable arc sprinkler mechanism according to claim 23, wherein said angularly movable arc stop member is movable according to disengagement of said arc stop assembly from said upper rotatable-sprinkler housing.

25. (Currently Amended) An adjustable arc sprinkler mechanism according to claim 24, wherein said disengagement of said arc stop assembly is through ~~radial~~ vertical movement of said arc stop assembly.

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26. (Currently Amended) An adjustable arc sprinkler mechanism according to claim 23, wherein said fixed arc stop member includes a radially flexible stop surface, said stop surface being radially flexed out of engagement with a ~~sprinkler~~ trip arm stop when said upper rotatable sprinkler housing with said fixed arc stop member is moving in a full circle direction.

27-33. (Cancelled)

34. (Currently Amended) An adjustable arc sprinkler mechanism comprising:

a sprinkler housing having a rotating portion, a stationary portion and an arc adjustment mechanism;

said rotating portion including a first set of gear teeth;

said arc adjustment mechanism including a second set of gear teeth selectively engagable with said first set of gear teeth;

said arc adjustment mechanism including an arc stop selectively angularly movable relative to said rotating portion and said stationary portion so as to set a desired arc for said rotating portion of said sprinkler mechanism;

said arc stop being movable between a minimum arc setting and a full circle setting;

said arc stop being movable between said minimum arc setting and said full circle setting without changing a vertical height of said sprinkler mechanism.

35. (Currently Amended) An adjustable arc sprinkler mechanism according to claim 34, wherein said arc stop is movable according to disengagement of an said arc adjustment mechanism from said rotatable portion.

36. (Currently Amended) An adjustable arc sprinkler mechanism according to claim 34, wherein said arc adjustment mechanism further includes a fixed arc stop member disposed on said rotating portion, wherein said fixed arc stop member includes a

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radially flexible stop surface, said stop surface being radially flexed out of engagement with a ~~sprinkler stop~~ trip arm when said arc stop is at said full circle setting.

37. (Previously Presented) An adjustable arc sprinkler mechanism according to claim 34, wherein said arc stop is positioned outside the path of a direction trip mechanism when said arc stop is located at said full circle setting.

38. (Currently Amended) A method of establishing full circle operation of an adjustable arc sprinkler mechanism comprising:

providing a sprinkler having a rotating section, a stationary section and an arc adjustment section, wherein said sprinkler has an established sprinkler height;

disengaging said arc adjustment section from said rotating section without changing the overall height of said adjustable arc sprinkler mechanism by decoupling a geared engagement between said arc adjustment section and said rotating section;

moving said arc adjustment section to a full circle setting on said sprinkler;

maintaining said established sprinkler height during both the disengaging of said arc adjustment section and during the moving of said arc adjustment section to said full circle setting.

39. (Previously Presented) A method according to claim 38, wherein moving the arc adjustment section to a full circle setting includes moving an adjustable arc stop out of a path of a direction changing switch.

40. (New) An adjustable arc sprinkler mechanism comprising:

an upper rotatable sprinkler housing;

a lower stationary sprinkler housing;

an arc stop assembly interposed between said upper and lower sprinkler housing;

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said arc stop assembly including a fixed arc stop member and an angularly movable arc stop member; and,

wherein at least one position of said angularly movable arc stop member enables said rotatable sprinkler housing to rotate in one continuous direction, and said angularly movable arc stop member is movable according to disengagement of said arc stop assembly from said upper rotatable sprinkler housing.

41. (New) An adjustable arc sprinkler mechanism according to claim 40, wherein said disengagement of said arc stop assembly is through vertical movement of said arc stop assembly.

42. (New) An adjustable arc sprinkler mechanism according to claim 40, wherein said fixed arc stop member includes a radially flexible stop surface, said stop surface being radially flexed out of engagement with a trip arm when said upper rotatable sprinkler housing with said fixed arc stop member is moving in a full circle direction.

43. (New) An adjustable arc sprinkler mechanism comprising:

an upper rotatable sprinkler housing;

a lower stationary sprinkler housing;

an arc stop assembly interposed between said upper and lower sprinkler housing;

said arc stop assembly including a fixed arc stop member disposed on said upper rotatable sprinkler housing and an angularly movable arc stop member, said fixed arc stop member including a radially flexible stop surface, said stop surface being radially flexed out of engagement with a sprinkler stop when said arc stop is at a full circle setting; and,

wherein at least one position of said angularly movable arc stop member enables said rotatable sprinkler housing to rotate in one continuous direction.

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44. (New) An adjustable arc sprinkler mechanism according to claim 43, wherein said angularly movable arc stop member is movable according to disengagement of said arc stop assembly from said upper rotatable sprinkler housing.

45. (New) An adjustable arc sprinkler mechanism according to claim 44, wherein said disengagement of said arc stop assembly is through vertical movement of said arc stop assembly.

46. (New) An adjustable arc sprinkler mechanism comprising:

a sprinkler housing having a rotating portion, a stationary portion and an arc adjustment mechanism;

said arc adjustment mechanism including an arc stop selectively angularly movable relative to said rotating portion and said stationary portion so as to set a desired arc for said rotating portion of said sprinkler mechanism;

said arc stop being movable between a minimum arc setting and a full circle setting;

said arc stop being movable between said minimum arc setting and said full circle setting without changing a vertical height of said sprinkler mechanism; and

wherein said arc stop is movable according to disengagement of an arc stop assembly from said rotatable portion.

47. (New) An adjustable arc sprinkler mechanism according to claim 46, wherein said arc adjustment mechanism further includes a fixed arc stop member disposed on said rotating portion, wherein said fixed arc stop member includes a radially flexible stop surface, said stop surface being radially flexed out of engagement with a sprinkler stop when said arc stop is at said full circle setting.

48. (New) An adjustable arc sprinkler mechanism according to claim 46, wherein said arc stop is positioned outside the path of a direction trip mechanism when said arc stop is located at said full circle setting.

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49. (New) An adjustable arc sprinkler mechanism comprising:

a sprinkler housing having a rotating portion, a stationary portion and an arc adjustment mechanism;

said arc adjustment mechanism including an arc stop selectively angularly movable relative to said rotating portion and said stationary portion so as to set a desired arc for said rotating portion of said sprinkler mechanism;

said arc stop being movable between a minimum arc setting and a full circle setting;

said arc stop being movable between said minimum arc setting and said full circle setting without changing a vertical height of said sprinkler mechanism;

said arc adjustment mechanism further including a fixed arc stop member disposed on said rotating portion, wherein said fixed arc stop member includes a radially flexible stop surface, said stop surface being radially flexed out of engagement with a sprinkler stop when said arc stop is at said full circle setting.

50. (New) An adjustable arc sprinkler mechanism according to claim 49, wherein said arc stop is movable according to disengagement of said arc adjustment mechanism from said rotatable portion.

51. (New) An adjustable arc sprinkler mechanism according to claim 49, wherein said arc stop is positioned outside the path of a direction trip mechanism when said arc stop is located at said full circle setting.

52. (New) A method of establishing full circle operation of an adjustable arc sprinkler mechanism comprising:

providing a sprinkler having a rotating section, a stationary section and an arc adjustment section, wherein said sprinkler has an established sprinkler height and wherein said arc adjustment section includes an arc stop;

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disengaging said arc adjustment section from said rotating section without changing the overall height of said adjustable arc sprinkler mechanism;

moving said arc stop of said adjustment section to a full circle setting on said sprinkler; and

maintaining said established sprinkler height during both the disengaging of said arc adjustment section and during the moving of said arc stop of said adjustment section to said full circle setting.

53. (New) A method according to claim 52, wherein moving said arc adjustment section to a full circle setting includes moving said arc stop out of a path of a direction changing switch.

54. (New) A method according to claim 52 wherein said sprinkler further includes a plurality of mating gears disposed on said arc adjustment section and said rotating section.

55. (New) A method according to claim 52 wherein said arc adjustment section further includes a fixed arc stop.

56. (New) A method according to claim 55 wherein said fixed arc stop includes a radially flexible stop surface, said stop surface being radially flexed out of engagement with said direction changing switch.

57. (New) A method of establishing full circle operation of an adjustable arc sprinkler mechanism comprising:

providing a sprinkler having a rotating section, a stationary section and an arc adjustment section, wherein said sprinkler has an established sprinkler height and wherein said arc adjustment section further includes a fixed arc stop member disposed on said arc adjustment section, wherein said fixed arc stop member includes a radially flexible stop surface;

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disengaging said arc adjustment section from said stationary section without changing the overall height of said adjustable arc sprinkler mechanism;

moving said arc adjustment section to a full circle setting on said sprinkler;

maintaining said established sprinkler height during both the disengaging of said arc adjustment section and during the moving of said arc adjustment section to said full circle setting; and

urging said radially flexible stop surface out of engagement with a trip arm when said arc adjustment section is at said full circle setting.

58. (New) A method according to claim 57, wherein moving the arc adjustment section to said full circle setting includes moving an adjustable arc stop out of a path of said trip arm.

59. (New) A method according to claim 57 wherein said sprinkler further includes a plurality of mating gear teeth on said rotating section and said arc adjustment section, said plurality of mating gear teeth being selectively disengagable.

60. (New) A method according to claim 57 wherein said disengaging said arc adjustment section is performed by vertically urging said arc adjustment section away from said rotating section.

61. (New) A method according to claim 57 wherein moving said arc adjustment section to said full circle setting includes rotating said adjustable arc section until an adjustable arc stop is positioned out of a path of said trip arm.